

DOCUMENT RESUME

ED 245 491

EC 162 851

AUTHOR Cannon, Stephen B.
TITLE The Effects of Training on Teachers' Verbal Contingent Responsiveness to Preschool Handicapped Children.
PUB DATE Apr 84
NOTE 86p.; Paper presented at the Annual Convention of the Council for Exceptional Children (62nd, Washington, DC, April 23-27, 1984).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143) -- Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Disabilities; *Inservice Teacher Education; Preschool Education; Programed Instructional Materials; *Program Effectiveness; *Student Teacher Relationship; *Verbal Communication

ABSTRACT

A study involving seven certified teachers, six aides, and 60 children investigated the effects of training on teachers' verbal contingent responses on handicapped preschoolers. Previous research on the effectiveness of preschool programs was reviewed, and literature on suggested competencies for teachers was considered. Teachers were observed in the classroom prior to and following training relating to their verbal responses to students' verbal and nonverbal behavior. Results indicate that a 2-hour training session was effective in improving Ss' responses to preschool handicapped children. A sample observation sheet as well as tables with statistical data are given. Appended is a copy of the programmed text used in the teacher training session. (SW)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED245491

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

The Effects of Training on Teachers' Verbal Contingent
Responsiveness to Preschool Handicapped Children

By

Stephen B. Cannon
Adjunct Professor - Converse College
P. O. Box 5348
Spartanburg, S. C. 29304
Telephone - 582-2334

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Stephen B
Cannon

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

EC 162851

Paper presented at the Annual Convention of the Council for Exceptional
Children (62nd, Washington, DC, April 23-27, 1984)

INTRODUCTION

Preschool Education

Overview. Preschool education for handicapped children has been a central theme of research in special education over the past decade. The works of Hunt (1961, 1971) and Bloom (1964) stimulated many investigations into the outcomes of preschool education for handicapped children and their families. The preponderance of conclusions drawn from these investigations (Bricker and Dow, 1980; Hanson and Schwarz, 1978; among others) concerning the effectiveness of preschool programs for handicapped children has centered on immediate and intermediate effects of various preschool curricula on handicapped children. These conclusions have been consistently similar. The handicapped children enrolled in preschool programs tended to experience immediate IQ and achievement gains and improvement in social and language skills. These findings indicated that regardless of curricular model, the outcomes of preschool education for handicapped children are the same. Yet, there has been no consensus regarding the qualities of preschool education which account for child outcomes. A group of studies, for example, has investigated the importance of qualities of the teacher which facilitate a child's development. Other studies have examined characteristics of teachers which were found to promote children's learning.

The current study investigated one characteristic of teachers of handicapped preschool children which research (Amidon and Giammatteo, 1965) indicated could potentially play an important role

in determining the effectiveness of preschool programs for handicapped children. The investigation focused on how adults verbally interact with preschool handicapped students. In particular, the investigation examined the effects of training on teachers' verbal contingent responses to preschool handicapped children.

The discussions which follow present evidence that this investigation was needed to help identify preschool program characteristics which facilitate program effectiveness. The effects of preschool involvement are discussed first to summarize research which indicated that preschool programs can be effective in enhancing children's education. Teacher training research will provide a rationale for this study and is discussed after preschool effectiveness. The conclusions drawn from preschool effectiveness incorporated with the characteristics of effective preschool teachers provide the basis on which this study was initiated.

Effects of preschool involvement. The reports from the Consortium for Longitudinal Studies (1979, 1980; Darlington, 1981; Lazar and Darlington, 1978; Peterson, 1977) discussed the effectiveness of preschool programs for disadvantaged children in terms of several benefits of their participation in preschool programs. The following six benefits for preschool children compared with non-preschool children were reported by investigators from the Consortium for Longitudinal Studies as immediate and intermediate effects of preschool involvement: less special class placement and less grade retention, increased IQ and achievement, and improvements in social/affective development and self concept. These benefits were also reported in additional reports on preschool programs for handicapped

children (Bricker and Dow, 1980; Connolly and Russell, 1976; Hanson and Schwarz, 1978; Highberger and Teets, 1974; Moore, Fredericks, and Baldwin, 1981; Mullin and Summers, 1983; Strain, Steele, Ellis and Timms, 1982).

The results of surveys of preschool programs for handicapped children (Karnes, Schwedel, Lewis, Ratts, and Esry, 1981; Lazar, 1980; Weikart, 1981) suggested that, although different programs use different bases for curriculum development, the benefits to children in these programs are similar. The surveys just cited and the studies cited above reported positive findings concerning preschool education for handicapped and disadvantaged children. There is a need to identify the characteristics of these programs which facilitated these positive outcomes. Furthermore, variables of preschool programs for handicapped children need to be investigated in order to identify program characteristics which distinguish between successful preschool programs from unsuccessful ones.

Weikart (1981, 1982) suggested that the adult working with preschool children is the determining variable pertaining to whether or not the preschool is effective in facilitating children's learning. Schweinhart and Weikart (1981) suggested that "diverse curricular models can be equally effective in promoting school success if high standards of quality are maintained" (p. 38). Weikart (1981) summarized this perspective by stating that the effectiveness of preschool programs depend on the dedication of a staff who are well versed in child development, having a knowledge base on how children learn, and who are committed to a specific curricular model. He further stated that the quality

of a preschool program is optimal when (a) it is well managed and monitored; (b) parents become partners with teachers in educating the child; (c) competent, committed teachers or caregivers plan and work together in teams to provide mutual support and individual attention; and (d) the program is regularly assessed to assure that goals for high quality are being met. In order for adults to meet the conditions of quality teaching as cited above, pre-service and in-service training could be provided to those adults specifically interested in educating young handicapped children.

Teacher training. Currently, 22 states have specific teaching certificates for teachers of preschool handicapped children (Mallory, 1983). The curriculum for certification appears to focus on five components: child development, administration, assessment, counseling and methodology. According to Mallory (1983), 56 teacher competencies have been generated from these components.

Hobbs (1975) suggested that the management of ecological systems within a preschool classroom has been a need of teachers of preschool handicapped children. Mallory (1983) stated that an ecological perspective is useful for understanding the special educational needs of handicapped preschool children. Within this ecological perspective, the verbal transaction between adult and handicapped child in the classroom is an important characteristic in the teaching methodology of the adult. Gordon (1973) stated that how one teaches is more important than what one teaches. Bereiter and Engelmann (1966) emphasized the teacher's use of verbal feedback on the student's behavior. Weikart (1969)

indicated that the teacher should be heavily involved in language training. Harris, Montrose, and Baer (1964) stated that teachers will help many children learn more easily through systematic programming of their adult social reinforcement. Buell, Stoddard, Harris, and Baer (1968) indicated that the preschool teacher should be a notable source of social reinforcement. A topic of concern for teacher training, therefore, should be teaching future teachers how to verbally respond to their students.

Purpose

Evidence supports the effectiveness of preschool programs, yet there is no clear picture of what accounts for the success generated by these programs. In light of the perspective presented by Lazar (1980), Karnes, Schwedel, Lewis, Ratts, and Esry (1981), and Weikart (1981), one might hypothesize that staff characteristics play a large role in nurturing child success. Evidence also supports the assumption that the teacher's verbal behavior in a classroom is a key ingredient in determining the success in the preschool setting. However, there is little agreement regarding how to train teachers of preschool handicapped children so that they know how to respond to their students appropriately. Consequently, the problem under investigation is to determine the effects of training on teachers' verbal contingent responsiveness to preschool handicapped children.

Research Questions

Two research questions were investigated in the present study:

Will the percentage of subjects' verbal contingent responses to handicapped or at-risk preschool children change as a result of training in providing appropriate verbal contingent responses to these preschool children?

Will the frequency of child-initiated verbalizations to subjects in the classroom change as a function of changes in subjects' verbal contingent responses?

METHODOLOGY

Settings

According to Medley and Mitzel (1963), investigations into teacher's verbal behavior should be conducted in the classroom, as opposed to other environments such as contrived therapy settings. Children usually learn to read, count, and develop social studies or science knowledge by spoken interactions (Sloane, 1976) which would best be observed in a naturalistic setting. Novak, Olley, and Kearney (1980) suggested that preschool classrooms are naturalistic environments where observers can accurately assess the interactions between teachers and students.

Before the observation sessions began, the investigator recruited the staffs of 10 preschool classrooms for handicapped

children. Because of communication and/or personal problems, the staffs of three of the classes were not able to participate in this study. One of these problems included a teacher who was given a copy of the research proposal, in advance of the study, by a school administrator. The proposal contained information which could have biased the observation had the teacher and aide of that class been included in the study. The administrators of the other two schools did not give permission for observations to take place in their schools. Therefore, seven classrooms for preschool handicapped children in the Northeast Georgia area were used as settings for this investigation. No two classrooms were in the same building. Observations were conducted from within the classrooms.

A wide variety of disabilities was represented by the children in these classes (behavior disorders, mental retardation, visual impairments, etc.). The common variable among this group of programs focused on curricular emphasis. During observation sessions, classroom activities centered on small group instruction, with the teachers and children engaged in language, cognitive, and social skill development exercises. In each of the classes, teachers were stimulating children's verbalizations. Each program coordinator suggested that the curriculum of these programs emphasized language, cognitive, and social development.

Subjects

Seven certified teachers and 6 aides participated in this investigation. All but one certified teacher were certified in

Early Childhood Special Education. These 13 females had had varying classroom experience: the teaching experience of the certified teachers ranged from 0 to 11 years; the classroom experience of the aides ranged from 3 to 15 years. The teaching experience of the certified teachers was not limited to special education. One subject had a total of 11 years' teaching experience (7 of these teaching in regular education classrooms). Of the aides, one was certified to teach in the regular middle and high school grades. One aide was licensed in speech pathology. Another aide worked in the classroom only part of the time. She was responsible for transporting the students to and from school. Therefore, all of the subjects involved in this study, with one exception, had more than 2 years of experience interacting with handicapped preschool children in a classroom setting. Prior to the beginning of the scheduled observation sessions, each subject signed a consent form, granting permission for the observations. Each subject was assigned an identification number ranging from 1 to 13. Subjects 1 through 6 were in the control group; subjects 7 through 13 were in the experimental group. No subject was informed of her identification number.

The pool of the staff of the seven classrooms taking part in this study was randomly divided into two groups: experimental and control group. The only difference between the groups was in the training the experimental group received from the investigator. The control group received no training from the investigator. A table of random numbers was used to assign the staff of the seven classrooms to either the experimental or control group. As a result of this procedure, the staff of four

of the classrooms comprised the experimental group; the staff of the remaining three classrooms comprised the control group. Two safeguards against biased data collection were implemented. Those subjects in the experimental group were informed of being experimental group members after they were observed twice. They were informed of their experimental group status at this time to set up training times. Observers were not informed which subjects were in which group. This second safeguard was implemented so that the objectivity of the observers' data collection would be maintained.

Children

The children ranged in age from 2.5 to 7 years. In all but two classes, the children were under 6 years of age. The identities of these children remained anonymous to the observers and to the investigator. Of the 60 handicapped children enrolled in the education programs represented in this study, 49 had the ability to communicate verbally. The remaining children did not have functional speech and language skills. The number of children who could verbally communicate facilitated the investigation concerning how changes in subjects' responses affected the children's verbal behavior.

Instruments

Two instruments were used in the current investigation: a modified version of the Stanford Research Institute-Classroom Observation Instrument (SRI), and a programmed text designed by the investigator.

The content of the programmed text focused on 5 criteria which research conclusions (Carlson and Bricker, 1982; Gordon, 1969; Salzburg and Villani, 1983; Stearns, 1971; Watson, 1967; among others) identified as being critical components of verbal responses to preschool handicapped children's behavior. These criteria indicate that a teacher's verbal response to students' verbal and nonverbal behavior is appropriate when the response is (a) given within 3 seconds of the child's behavior; (b) given prior to other comments by the teacher; (c) reflecting the child's behavior or statement; (d) given at the child's comprehensive level; and (e) given in an appropriate tone of voice. The training received by the subjects and by the data collectors focused on these criteria.

Procedures for Data Collection

Observer training. Two groups of observers were recruited for this study. One group of five observers had the responsibility of collecting data on the subjects in four classrooms in the greater Atlanta, Georgia, area. These observers were para-professionals working as Health Service Technicians at the Georgia Retardation Center in Chamblee, Georgia. Training for this group was held at Georgia State University and lasted five days. During this training, 3 video-cassette tapes containing segments of classroom interactions between teachers and handicapped preschool children were used to illustrate how teachers verbally interact with their handicapped preschool students. Two of these tapes were produced by the investigator in conjunction with the Toddler Learning Class of the University of Georgia's College of Education. The third tape was produced by

Dr. Warren Umansky. These same tapes were used in training the second group of observers.

The second group of observers consisted of two University of Georgia students. One of the observers was a graduate student in Business Administration; the other was a senior majoring in Early Childhood Education. They were responsible for data collection on the subjects in the classrooms in Clarke, Elbert, and Walton Counties (of Georgia). Training for this group of observers was held at the University of Georgia and lasted four days. Both groups of observers were instructed to record the subjects' responses, or lack of responses, upon each opportunity teachers had to verbally respond to their students' verbal and nonverbal behavior.

Successful completion of observer training was determined when any two observers reached the .80 level of interobserver reliability (Nunnally, 1978). The pilot study results indicated that the two observers agreed in their classification of teachers' responses to children's verbal and nonverbal behavior. This finding was represented by non-statistically significant chi-squares ($p > .05$). The training the observers received for this study was more intense than the training the pilot study observers received; thus, the observers for the current study would also agree upon the classification of teachers' responses. Because of the agreement between the two pilot study observers' classification of subjects' verbal behavior, and because the training the observers for the current study covered more consecutive training days than the training of the pilot study observers, chi-square checks were not performed on the reliability of interobserver agreement for the current study.

Observation sessions. The observation sessions were conducted by two observers per session. The observers were given a place to sit by the lead teacher in the classroom. The observers had optimal conditions for collecting frequency data; they sat near the subject in order to see and hear all interactions between the subjects and children. Five, 5-minute segments were used in observing each subject. One observer timed each segment. At the end of the 1st through the 4th minutes, this observer said "Time" to indicate that observation should proceed to the next minute. (Refer to the data sheet for an illustration - Figure 1). At the end of the 5th minute, the observer keeping time said "End" to indicate the termination of that observation segment. Each subject was observed for a total of 25 minutes per day, 1 day per week for 4 weeks; thus, each teacher was observed for 100 minutes. When time permitted, both subjects in a classroom were observed during the same day. A few problems arose in terms of observation session scheduling. On 4 occasions, the observers had to visit classrooms twice in one week. At no time, however, were observation sessions conducted during 2 consecutive days for any classroom staff. Once the observers ended each observation session, they submitted the data to the principal investigator, who prepared the data for analysis.

Teacher Training. The 7 subjects of the experimental group (4 teachers and 3 aides) completed a 2-hour training session designed and directed by the investigator. Through telephone contacts the subjects and investigator established times and places for this training. Because of difficulty in having the subjects meet at

one time, the decision to conduct training at the subjects' respective schools or at the University of Georgia was the most convenient option for all involved. A total of five training sessions were conducted by the investigator.

The training began with the investigator giving an overview of the training and on what teacher behaviors the observers were to be observing. None of the subjects were informed of how well they had verbally responded to their students' verbal and nonverbal behavior during the first two observation sessions. After a question-and-answer period, each subject proceeded to work independently with the programmed text. The average time taken for the subjects' completion of the text was 90 minutes. The total time used for training was 2 hours. Two hours were selected because of the scheduling difficulties of the subjects and because of the narrow scope of the training sessions. Each teacher completed one training session. At the conclusion of the training session, each teacher was given a copy of the programmed text. After the members of the experimental group completed the training session with the investigator, they were observed 2 more times, making a total of 4 observation sessions per subject.

Statistical Hypotheses

The following statistical hypotheses were investigated in this study:

1. Teacher training did not produce statistically

significant differences ($p > .05$) between the quality of the experimental group subjects' verbal responses and the quality of the control group subjects' verbal responses.

2. A change in the quality of the experimental group subjects' verbal responses did not change the frequency of children's-initiated verbalizations of the students of the subjects in the experimental group.

Procedures for Data Analysis

When all data were submitted to the investigator, the data were stored in a Statistical Analysis Systems (SAS) data set. Storing data in SAS data sets facilitated easy access to the data for analyses. The variables used in this investigation were the following:

AV: Frequency of subjects' appropriate responses to children's verbalizations.

IV: Frequency of subjects' inappropriate responses to children's verbalizations.

ANV: Frequency of subjects' appropriate responses to children's nonverbal behavior.

INV: Frequency of subjects' inappropriate responses to children's nonverbal behavior.

PERCENT-AV: Percentage of subjects' appropriate responses to children's verbalizations. For the experimental group, this variable represented the percentage of appropriate verbal responses to children's verbalizations after the subjects in this group underwent training. This variable was based on both AV and IV.

PERCENT-ANV: Percentage of subjects' appropriate responses to children's nonverbal behavior. For the experimental group, this variable represented the percentage of appropriate responses to children's nonverbal behavior after the subjects in this group underwent training. This variable was based on both ANV and INV.

TEACHEX: Number of years the subject had teaching in a classroom for preschool handicapped children.

MODULE: Difference in percentage of correct responses between pre-and posttest in the training module. This variable was applicable for the subjects of the experimental group only.

TOTFREQ: Average frequency of child-initiated verbalizations across the four observation days.

PREFREQ: Average frequency of child-initiated verbalizations across the first two observation days.

POSTFREQ: Average frequency of child-initiated verbalizations across the last two observation days.

The procedures used for data analysis were from the

Statistical Analysis Systems (1979) manual. To examine the effectiveness of training on changing the subjects' appropriate verbal response rate, the multivariate option of the Analysis of Variance (ANOVA) procedure was used. This analysis was divided two ways: the experimental group's posttraining percentages of appropriate verbal responses to handicapped children's verbal and nonverbal behavior was compared with the control group's overall percentages of appropriate verbal responses to handicapped children's verbal and nonverbal behavior; and the experimental group's posttraining percentages of appropriate verbal responses to handicapped children's verbal and nonverbal behavior was compared with the pretraining percentages. Hotelling's T^2 (Tatsuoka, 1971) was the statistic used in these comparisons. Concerning the effects of the teachers' training on the frequency of child-initiated verbalizations, a t-test with correlated samples was used (Minium, 1978). The dependent variables for these analyses were PERCENT-AV, PERCENT-ANV, PREFREQ AND POSTFREQ.

RESULTS

Overall Results

Research Question 1. Two separate analyses were conducted for the first research question. The first procedure used Hotelling's two independent samples T^2 (Tatsuoka, 1971, pp. 78-79, formulas 4.22 and 4.25) to test the difference between experimental and control groups' mean percentages of giving appropriate responses to pre-school school handicapped children. The average posttraining percentages of the experimental group's responses to children's verbal and nonverbal behavior (PERCENT-AV and PERCENT-ANV,

respectively) were compared with the control group's average percentages of the same dependent variables. The results indicated that there was no statistically significant difference ($p > .05$) between these two groups. Table 1 contains the Hotelling's T^2 and Approximate F -statistic for this analysis.

A power analysis was conducted on the results for this analysis (Cohen and Cohen, 1973, formula 9.3.3, p. 415). The results of the power analysis indicated that the power to detect a significant difference ($p < .05$) was approximately .01, suggesting that if differences noted in this analysis truly existed, one would expect to detect these differences approximately 1% of the time when a sample of 13 participants is involved. This power analysis was applicable only to the multivariate Hotelling's T^2 test.

The second procedure used to analyze data for this research question was a comparison of the experimental group's pretraining percentages of appropriate responses with the same group's post-training percentages on the dependent variables PERCENT-AV and PERCENT-ANV. This procedure used Hotelling's dependent sample T^2 to test the difference between the average pretraining and post-training percentages of subjects' appropriate responses. The results indicated statistically significant differences ($p < .05$) between the pre- and posttraining sessions. Table 2 contains Hotelling's T^2 and approximate F -statistic for this analysis. To check on the reliability of this outcome, a comparison was made of the control group's appropriate response percentages of the first two observation sessions against the same group's appropriate response percentages of the latter two observation sessions. Hotelling's T^2 was used in this analysis also. The results indicated no statistically significant difference between these two series of

observation sessions ($p > .05$, F with 2, 4 degrees of freedom = .0064).

Finally, a univariate dependent sample t -test was performed on each of the dependent variables (PERCENT-AV and PERCENT-ANV) to determine if either variable accounted for the significant difference between the experimental group's pretraining and post-training means. The results indicated nonsignificance on both t -tests ($p > .05$; PERCENT-AV t with 6 degrees of freedom = .8040, and PERCENT-ANV t with 6 degrees of freedom = 1.8488). The results of the t -tests indicated that the means of neither dependent variable were statistically significant between the experimental group's pre- and posttraining observation sessions when analyzed independently. Instead, the two dependent variables when analyzed together produced statistically significant differences.

Research Question 2. A t -test was used in this analysis to test the difference between the mean of child-initiated verbalizations before and after the experimental group's training. The frequencies were based on both appropriate and inappropriate responses given by the teachers in the experimental group. Table 3 contains a summary of these frequencies before and after training. The results indicated that there was no statistically significant difference between the frequencies before and after teacher training concerning child-initiated verbalizations of the students in the experimental groups' classrooms ($p > .05$). Therefore, the change in experimental group subjects' proportion of appropriate responses did not significantly alter the number of their students' verbalizations. As can be seen in Table 3, however, there was an observed, nonstatistically significant

($p > .05$) tendency for the frequencies of child-initiated verbalizations to decrease between the pretraining and posttraining sessions. The frequencies of four subjects' responses to children's verbalizations decreased. One subject's frequency remained approximately the same, and two subjects' frequencies increased a substantial amount.

Additional Information Concerning Subjects' Responses

Control group. Table 4 contains a summary of the control group's data over four observation sessions. Averages of 131.83 appropriate (AV) and 39.33 inappropriate (IV) responses to children's verbalizations, and averages of 79.67 appropriate (ANV) and 36.50 inappropriate (IV) responses to children's nonverbal behavior were given by this group to their students. Table 5 contains the control group's percentages of appropriate responses to children's verbal and nonverbal behavior covering the four observation sessions. Data in Table 4 reveal that the control group's percentage of appropriate responses to children's verbalizations was 78.33%; this group's percentage of appropriate responses to children's nonverbal behavior was 64.17%. These percentages were computed from data in Table 5. Concerning subjects' appropriate verbal responses to children's verbalizations, 5 of 6 subjects in this group had appropriate response percentages of 75% or higher; only one teacher had a percentage under 75%. With regard to the appropriate responses to children's nonverbal behavior, all subjects in this group but one had percentages of less than 75%. These results indicated that the subjects in the control group provided more appropriate verbal responses to their students' verbalizations than to their students' nonverbal behavior.

Experimental group. Table 6 contains a summary of the experimental group's data. An average of 74.29 appropriate (AV) and 12.29 inappropriate (IV) responses to children's verbalizations, and 71.43 appropriate (ANV) and 41.00 inappropriate (INV) responses to children's nonverbal behavior were given by the subjects in this group. These data represented average percentages of 86% appropriate responses to children's verbalizations, and 64% appropriate responses to children's nonverbal behavior. Table 7 contains the experimental group's percentages of appropriate responses to children's verbal and nonverbal behavior. These results represented overall group's responses during the 4 observation sessions. Entries in Tables 6 and 7 are separated by pre- and posttraining sessions.

For the pretraining sessions, the subjects in the experimental group averaged 39.14 appropriate (AV) and 8.57 inappropriate (IV) responses to children's verbalizations, and averages of 33.71 appropriate (ANV) and 22.71 inappropriate (INV) responses to the children's nonverbal behavior representing average percentages of 82% and 60% appropriate responses, respectively. Six of seven subjects had percentages of appropriate responses to children's verbalizations greater than 75%. Subject 10 was the only one who demonstrated a need for training in appropriately responding to children's nonverbal behavior; no subject demonstrated appropriate responses to children's nonverbal behavior at a level greater than 70%.

During the posttraining observation sessions, this group averaged 35.12 appropriate (AV) and 3.71 inappropriate (IV) responses to children's verbalizations, representing an average percentage of 90% appropriate responses. This group also averaged

37.71 appropriate (ANV) and 18.29 inappropriate (INV) responses to children's nonverbal behavior, representing an average percentage of 67% appropriate responses. All but one subject made improvements over their pretraining percentages of appropriate responses to children's nonverbal behavior. Four subjects had percentages at levels of 70% or higher.

DISCUSSION

Overview

The results of this study indicated that a two-hour training session was effective in improving the proportion of experimental group subjects' appropriate responses to preschool handicapped children's verbal and nonverbal behavior (F with 2 and 4 degrees of freedom = 13.22, $p < .05$). During pretraining observation sessions, the experimental group subjects gave averages of 78.71% appropriate responses to children's verbalizations and 59.86% appropriate responses to children's nonverbal behavior. During posttraining observations the experimental group subjects gave averages of 86.57% appropriate responses to children's verbalizations and 70.00% appropriate responses to children's nonverbal behavior. These data were taken from Table 1. These improvements were based on empirical evidence concerning the components of appropriate verbal responses provided by adults. The length of time between training and the final observation session for each subject was two weeks. Therefore, the training the experimental group received was effective in maintaining at least moderately high levels of subjects' appropriate responses to children's verbal and nonverbal behavior for at least two weeks. The results

of this training demonstrated that two-hour in-service training sessions can be effective given a specified set of performance objectives and a narrow scope of instruction.

Differences between experimental group and control group subjects' average proportions of appropriate responses were not significant ($p > .05$), indicating that the posttraining proportions of appropriate responses of the experimental group subjects did not significantly differ from the proportions of appropriate responses of the subjects in the control group. The experimental group's average percentages of appropriate responses to children's verbal and nonverbal behavior were 86.57% and 70.00%, respectively. These were not significantly different from the control group's average percentages of appropriate responses to children's verbal and nonverbal behavior of 78.33% and 64.17%, respectively. These results demonstrated a trend in the desired direction, however, with the experimental group's average proportions of appropriate responses being greater than the average proportions of the control group subjects.

In-Service Education

One of the primary roles of teachers is that of assisting students in their social and cognitive development (Gordon, 1974). This investigation focused on one way that teachers can provide an environment conducive to social and cognitive development. The effects of the training the experimental group received demonstrated that once teachers are aware of new ways to improve their teaching styles, improvement in their teaching may occur. In-service education could provide school staffs with information

on teaching methodology. Bloom (1978) stated that teachers need to be helped in developing methods of teaching that result in a more effective realization of their own ideal of equal learning opportunities for all students.

Behavior change. The time between the training the experimental group subjects received and final observation session was approximately two weeks which was not enough time to determine if the observed changes became firmly integrated into the subjects' repertoire of teaching behaviors. Taba (1966) suggested that the full effect of teacher training is not completely evident over short periods of time after training because of the time needed to practice the new behaviors. Sparks (1983) warned that teachers are unlikely to use new or unfamiliar teaching techniques unless they receive effective instruction in the use of the new techniques. Based on data collected from the subjects concerning the programmed text and the subjects' evaluation of the text, the use of programmed instruction assisted in making the training effective.

Programmed instruction. Gagne' (1965) indicated that immediate feedback to teachers assists them in learning new instructional material. Amidon and Flanders (1971) stated that feedback to teachers is essential to facilitate improved teaching skills. The effects of other forms of feedback, such as verbal and delayed feedback, on teachers' verbal behavior should be investigated before one could substantiate the effectiveness of immediate written feedback provided in a programmed text. This study demonstrated that the use of immediate feedback assisted in helping an experimental group of teachers become aware of how they verbally responded

to their preschool handicapped children's verbal and nonverbal behavior. All seven experimental group subjects evaluated the text at the conclusion of their training session. Six of the seven subjects in the experimental group agreed that the text was neither too long nor too short for its intended purpose. Six of the seven subjects also reported that the information in the text helped them become aware of the ways they should respond to their students' verbal and nonverbal behavior, and that the presentation of the information was straightforward and clear. All seven subjects reported that the programmed text format was easier to follow than a typical monograph which could provide the same information but without any opportunity to demonstrate what was learned. Six of the seven subjects demonstrated improvements in their proportions of correct responses from the pretest to the posttest of the text. This finding suggested that the text assisted in changing these teachers' verbal responses to their students' verbal and nonverbal behavior. Also, this finding was supported by the statistically significant results ($p > .05$) of the comparison between the experimental group's pre- and post-training observation sessions. Based on these results, the training appeared to demonstrate its worth by producing the changes of teachers' verbal behavior. However, intergroup comparison results demonstrated that training did not produce strong enough differences for one to accurately state that in all circumstances training was more effective in producing changes in teachers' verbal behavior than no training.

CONCLUSION

In 1971, the California Task Force on Early Childhood Education issued this statement:

Since all men and women of every race and creed indeed do have inalienable rights to life, liberty, and the pursuit of happiness, it is the business of society to assure these rights for every child. He is ...tomorrow's adult. (p. 1)

One year before this report, the White House Conference on Children recommended as its number one priority that the federal government fund comprehensive child-care programs, including health, early childhood education, and social services (Riles, 1972). Statements such as these provide evidence that educating young children is a national interest. The responsibility of providing these children with an educational environment which optimizes learning opportunities for these children belongs to teachers. Some summary suggestions for teachers, assisting them in meeting this responsibility has been provided. According to Gagne' (1965), a teacher should provide feedback to the child within a few seconds of the child's performance (or attempted performance) of the task. Salzberg and Villani (1983) suggested that the feedback should be given to the child after his or her performance, before a tangential comment or another instruction is given by the teacher. Gordon (1973) stated that the feedback should contain descriptive words which reflect the child's verbalization or nonverbal behavior. Stearns (1971) stated that the most effective teaching takes place at the child's comprehension level. Gordon (1969, 1975) suggested that feedback to a

child should be given in a positive emotional climate.

Educators should contribute to the long-term effort of educating young handicapped children by seeking to improve available programs and to develop new strategies and procedures to optimize handicapped children's potential and performance (Hayden and Haring, 1976). This study demonstrated that inservice training is a viable method of maintaining further development of new procedures to assist teachers with their responsibilities in the classroom. The results of this study provided evidence that a brief training period was effective in assisting teachers from a wide range of teaching experience develop more effective methods of verbally responding to their students' behavior, a characteristic which has been shown to influence children's learning. More research on teachers' verbal responsiveness is needed to further identify and specify the characteristics of effective teaching.

FIGURE 1

Five Minute Observation Sheet

	Responses to Child's Verbalizations	Responses to Child's Nonverbal Behavior
1. Approp		
Inapprop		
2. Approp		
Inapprop		
3. Approp		
Inapprop		
4. Approp		
Inapprop		
5. Approp		
Inapprop		

Summary:

Responses to Children's
Verbalizations:

Appropriate: _____

Inappropriate: _____

Percentages:

Appropriate/Total X 100 = _____

Responses to Children's
Nonverbal Behavior:

Appropriate: _____

Inappropriate: _____

Appropriate/Total X 100 = _____

TABLE 1

Hotelling's T^2 Results Comparing the Experimental Group
With the Control Group ^a

Group	Variable	Mean	Hotelling's T^2	F-Approx.
Experi- mental	PERCENT-AV	86.57		
	PERCENT-ANV	70.00		
			1.34	0.61
Control	PERCENT-AV	78.33		
	PERCENT-ANV	64.17		

^a The experimental group's posttraining average percentages were compared with the average percentages of the control group (covering four observation sessions).

TABLE 2

Experimental Group Pretraining - Posttraining Comparison

Session	Variable	Mean	Hotelling's T^2	F-Approx.
Pre- training	PERCENT-AV	78.71	31.73	13.22 *
	PERCENT-ANV	59.86		
Post- training	PERCENT-AV	86.57		
	PERCENT-ANV	70.00		

* $p < .05$

TABLE 3

Frequencies of Child-Initiated Verbalizations to Subjects
and Differences Between Pre- and Posttraining Sessions ^a

Subject	Pretraining			Posttraining			Difference (Tot. Post -Tot. Pre)	t	Prob. t
	AV	IV	Tot.	AV	IV	Tot.			
7	46	5	<u>51</u>	109	11	<u>120</u>	69		
8	67	6	<u>73</u>	39	0	<u>39</u>	-34		
9	143	29	<u>172</u>	80	6	<u>86</u>	-86		
10	27	38	<u>65</u>	53	10	<u>63</u>	-02	-2.027	.4314
11	29	8	<u>37</u>	10	9	<u>19</u>	-18		
12	168	13	<u>181</u>	91	7	<u>98</u>	-83		
13	69	18	<u>87</u>	109	9	<u>118</u>	31		
AVERAGES			<u>95.14</u>			<u>77.57</u>	-17.57		

^a Entries are total frequencies of the experimental group teachers reported by the two observers.

TABLE 4

Average Frequencies of Control Group Subjects' Responses ^a

Subject	AV	IV	ANV	INV
1	199	64	34	30
2.	147	83	16	33
3	92	25	169	59
4	134	12	133	58
5	143	27	81	23
6	76	25	45	16

^a Entries are average frequencies of responses recorded by the two observers. The data used for analysis, however, were total frequencies.

TABLE 5

Percentages of Control Group Subjects'
Appropriate Responses ^a

Subject	PERCENT-AV	PERCENT-ANV
1	76	53
2	64	32
3	79	74
4	92	70
5	84	82
6	75	74

^a Entries were calculated from raw data.

TABLE 6

Average Frequencies of Experimental Group
Subjects' Responses ^a

Subject	Session	AV	IV	ANV	INV
7	Pre	23	3	49	21
	Post	55	5	72	26
8	Pre	33	3	31	25
	Post	19	0	59	45
9	Pre	71	15	47	26
	Post	40	3	25	15
10	Pre	13	19	35	43
	Post	27	5	33	14
11	Pre	15	4	22	19
	Post	5	4	27	17
12	Pre	84	7	39	17
	Post	45	4	26	9
13	Pre	35	9	13	8
	Post	55	5	22	2

^a Entries are average frequencies of responses recorded by the two observers. The data used for data analyses, however, were the total frequencies.

TABLE 7

Percentages of Experimental Group Subjects'
Appropriate Responses ^a

Subject	Session	PERCENT-AV	PERCENT-ANV
7	Pre	90	70
	Post	91	73
8	Pre	92	54
	Post	100	57
9	Pre	83	64
	Post	93	62
10	Pre	42	45
	Post	84	70
11	Pre	78	53
	Post	53	61
12	Pre	93	69
	Post	93	74
13	Pre	79	63
	Post	92	92

^a Entries were calculated from raw data.

REFERENCES

- Amidon, E., and Flanders, N. (1971). The role of the teacher in the classroom: A manual for understanding and improving teachers' classroom behavior, (revised ed.). Minneapolis, MN: Paul S. Simon and Associates.
- Amidon, E., and Giammatteo, M. (1965). The verbal behavior of superior teachers. The Elementary School Journal, 65, 283-285.
- Bereiter, C., and Engelmann, S. (1966). Teaching disadvantaged children in the preschool. Englewood Cliffs, NJ: Prentice-Hall.
- Bloom, B. (1964). Stability and change in human characteristics. New York: John Wiley and Sons.
- Bloom, B. (1978). New views of the learners: Implications for instruction and curriculum. Educational Leadership, 563-576.
- Bricker, D., and Dow, M. (1980). Early intervention with the young severely handicapped child. Journal of the Association of the Severely Handicapped, 5 (2), 130-142.
- Buell, J., Stoddard, P., Harris, F., and Baer, D. (1968). Collateral social development accompanying reinforcement of outdoor play in a preschool child. Journal of Applied Behavior Analysis, 1 (2), 167-173.
- California State Department of Education (1971). Report of the Task Force on Early Childhood Education. Sacramento, CA.
- Carlson, L., and Bricker, D. (1982). Dyadic and contingent aspects of early communication intervention. In D. Bricker (Ed.), Intervention with at-risk and handicapped infants: From research to application. Baltimore, MD: University Park Press.
- Cohen, J., and Cohen, P. (1978). Applied multiple regression and correlation analyses for the behavioral sciences, (revised ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Connolly, B., and Russell, F. (1976). Interdisciplinary early intervention program. Physical Therapy, 56 (2), 155-158.
- Consortium for Longitudinal Studies (1979). Summary report: Lasting effects after preschool. Final report #906-1311. Washington, D.C.: U.S. Department of Health, Education, and Welfare (Office of Human Development Services).
- Consortium for Longitudinal Studies (1980). Persistence of preschool effects. Report #90c-1311 (03). Washington, D.C.: Administration for Children, Youth, and Families.

- Darlington, R. (1981). The Consortium for Longitudinal Studies. Education Evaluation and Policy Analysis, 3 (6), 37-45.
- Gagne', R. (1965). The conditions of learning. New York: Holt, Rinehart, and Winston.
- Gordon, I. (1969). Early stimulation through parent education. Paper presented at the American Psychological Association. Washington, D.C.
- Gordon, I. (1973). Early stimulation through parent education. In L. Stone, H. Smith, and L. Murphy (Eds.), The competent infant: Research and commentary. New York: Basic Books, Inc.
- Gordon, I. (1975). Human development: A transactional perspective. New York: Harper and Row.
- Gordon, T. (1974). Teacher effectiveness training. New York: Peter H. Wyden.
- Hanson, M., and Schwarz, R. (1978). Results of a longitudinal intervention program for Down's Syndrome infants and their families. Education and Training of the Mentally Retarded, 13 (4), 403-407.
- Harris, B., Montrose, M., and Baer, D. (1964). Effects of adult social reinforcement on child behavior. Young Children, 8-17.
- Hayden, A., and Haring, N. (1976). Early intervention for high risk infants and young children: Programs for Down's Syndrome children. In T. Tjossem (Ed.), Intervention strategies for high risk infants and young children. Baltimore, MD: University Park Press.
- Highberger, R., and Teets, S. (1974). Early schooling: Why not ? - A reply to Raymond Moore and Dennis Moore. Young Children, 66-77.
- Hobbs, N. (1975). The futures of children: Categories, labels, and their consequences. San Francisco, CA: Josey-Bass.
- Hunt, J. McV. (1961). Intelligence and experience. New York: Ronald Press.
- Hunt, J. McV. (1971). The epigenesis of intrinsic motivation and early cognitive learning. In R. Anderson, and H. Shane (Eds.), As the twig is bent. Boston, MA: Houghton Mifflin.
- Karnes, M., Schwedel, A., Lewis, G., Ratts, D., and Esry, D. (1981). Impact of early programming for the handicapped: A follow-up study into elementary school. Journal of the Division for Early Childhood, 4, 62-79.

- Lazar, I. (1980). Preschool programs and later competence of children from low-income families. Science, 202-204.
- Lazar, I., and Darlington, R. (1978). Lasting effects after preschool. Report #90c-1311. Washington, D.C.: Consortium for Longitudinal Studies. Department of Health, Education, and Welfare (Office of Human Development Services).
- Mallory, B. (1983). The preparation of Early Childhood Special Educators: A model program. Journal of the Division for Early Childhood, 7, 32-40.
- Medley, D., and Mitzel, H. (1963). The scientific study of teacher behavior. In R. Bellack (Ed.), Theory and research in teaching. New York: Teachers College Press.
- Minium, E. (1978). Statistical reasoning in psychology and Education (2nd ed.). New York: John Wiley and Sons.
- Moore, M., Fredericks, H., and Baldwin, V. (1981). The long-range effects of early childhood education on a T.M.R. population. Journal of the Division for Early Childhood, 4, 94-110.
- Mullin, S., and Summers, A. (1983). Is more better? The effectiveness of spending on compensatory education. Phi Delta Kappan, 64 (5), 339-347.
- Novak, M., Olley, J., and Kearney, D. (1980). Social skills of children with special needs in integrated and separate preschools. In T. Fields (Ed.), High-risk infants and children: Adult and peer interactions. New York: Academic Press.
- Nunnally, J. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill Book Co.
- Peterson, J. (1977). Summary report: The persistence of preschool effects. Consortium on Developmental Continuity. Final report #18-76-07843. Washington, D.C.: U.S. Department of Health, Education, and Welfare (Office of Human Development Services).
- Riles, W. (1972). When should schooling begin? Phi Delta Kappan, 610-614.
- Salzberg, C., and Villani, T. (1983). Speech training by parents of Down's Syndrome toddlers: Generalization across settings and instructional contexts. American Journal of Mental Deficiency, 87 (4), 403-413.
- Sloane, H. (1976). Classroom management: Remediation and prevention. New York: John Wiley and Sons.
- Sparks, G. (1983): A study of inservice training, teacher characteristics, and teacher change. Paper presented at the American Educational Research Association conference. Montreal, Canada.

Statistical Analysis System (1979). SAS user's guide (1979 ed.).
Raleigh, NC: SAS Institute.

Stearns, M. (1971). Report on preschool programs: The effects of preschool programs on disadvantaged children and their families. Washington, D.C.: U.S. Department of Health, Education, and Welfare (Office of Child Development).

Strain, P., Steele, P., Ellis, T., and Timm, M. (1982). Long-term effects of oppositional child treatment with mothers as therapists and therapist trainers. Journal of Applied Behavior Analysis, 15 (1), 163-169.

Taba, H. (1966). Teaching strategies and cognitive functioning in elementary school children. Cooperative research program of the Office of Education, #2504. San Francisco, CA: U.S. Department of Health, Education, and Welfare.

Tatsuoka, M. (1971). Multivariate analysis: Techniques for educational and psychological research. New York: John Wiley and Sons.

Watson, J. (1967). Memory and "contingency analysis" in infant learning. Merrill-Palmer Quarterly, 13, 55-76.

Weikart, D. (1969). Comparative study of three preschool curricula. Paper presented at the biennial meeting of the Society for Research in Child Development. Santa Monica, CA.

Weikart, D. (1981). Effects of different curricula in early childhood intervention. Education Evaluation and Policy Analysis, 3, 25-35.

Weikart, D. (1982). The cost-effectiveness of high quality early childhood programs. A report for the Southern Legislators' Conference. Hilton Head Island, SC.

APPENDIX A

**THE EFFECTS OF TRAINING ON ADULTS'
VERBAL CONTINGENT RESPONSIVENESS TO
PRESCHOOL HANDICAPPED CHILDREN**

Training Module

A Programmed Text

by

Stephen B. Cannon, M.S.

Title

THE EFFECTS OF TRAINING ON ADULTS'
VERBAL CONTINGENT RESPONSIVENESS TO
PRESCHOOL HANDICAPPED CHILDREN

Training Module

Introduction

During a typical class, preschool students and the adults in the classroom verbally interact many times. Some of these interactions are not appropriate in terms of the verbal stimulation children this age need in order to develop their language and intellectual skills. Such inappropriate interactions as initiated by the adult are, for example, speaking in harsh tones, and not responding or delaying in responding to a child's statements, actions, or presentation of something he has made.

Purpose

This training module will present some concepts to you which will make you become more aware of how you verbally reinforce your preschool students' statements and actions. The information in this module will focus on a concept known as verbal contingent responsiveness.

Definition

Verbal contingent responsiveness may be regarded as the verbal reinforcement one person gives to another contingent upon the latter's statement or action. In the situations used in this module, any positive, reinforcing remark made by the adult toward a preschool child after the latter has made a statement or performed some observable action, may be classified as an appropriate contingent response. Negative feedback is a term used in this module to demonstrate an adult's verbal response which will not increase the child's appropriate elicitation of statements to adults or appropriate actions. Telling a child to "tell me later" is a good example of negative feedback.

Overview

This module is a programmed text designed for the adult in the preschool classroom, and for those college students who will enter the preschool teaching field within one year. It is desired that you will become more aware of how the dynamics of verbal interaction affects young children's learning. Research has demonstrated that the provision of verbal feedback in a timely manner (i.e. immediately following something the child has said or done) strengthens the stimulus-response bond between what the child does and the consequences provided by the adult.

Research has also demonstrated that in the classroom, the adult is perhaps the most important factor in the learning of young children. The information in this programmed text will not present research findings to you; instead, it will present you with some criteria for appropriate verbal contingent responses, along with several examples. Also included in this module will be some examples of negative feedback. You will first take a brief pretest to see how well you do before being presented with criteria for appropriate contingent responses. After the material is presented to you, you will be given a posttest to determine how well you understand the criteria of appropriate contingent responses. At the conclusion of this module, you will be asked to provide this investigator with an evaluation of the information presented. Your participation in this work is gratefully appreciated.

Objective

At the completion of this training module, you will be able to:

1. Discriminate between verbal contingent responses and negative feedback as elicited by an adult in a preschool classroom, by successfully completing a posttest at at least 80% accuracy.
2. Identify the criteria for verbal contingent responses through completing a posttest at at least 80% accuracy.

Directions

This programmed text is designed for individual learning speeds. Some of those participating in this session will take longer to complete this module than others. The researchers will be available for clarification or comment throughout your work, however, you are encouraged to proceed independently. Please make any comment you wish in this booklet. You will return this booklet to the director of this training session when you complete your work. The comments you make in this booklet and on the evaluation sheet will be used for improving this module. Proceed through each activity in this booklet. Please complete all tasks. Remember that your name will not be used in this program, so do not put your name anywhere on the booklet.

If you have any questions regarding the information in this booklet or desire any information concerning this research, contact:

Stephen B. Cannon
570 Aderhold Hall - Division
for the Education of Exceptional
Children
University of Georgia
Athens, Georgia 30602
(404) 542-1685

Pre-test Introduction	Before starting work with the criteria and examples of appropriate verbal contingent responses, see how well you do on your own. Read the following vignette, then proceed through the pre-test.
--------------------------	--

Vignette	Beth is the head teacher in a preschool classroom of 10 children ages 3 through 5 years. These children are verbal, very active children who were born at-risk for future developmental problems. Each child had a low birth weight and each comes from a family where the highest education level of the parents is pre-high school. Five of the children were born into families where the mother was younger than 18 years old. Two of the ten children have more than three siblings, all of which were born at-risk. Fortunately, none of the children have chronic health problems.
----------	---

There is one full time aide in the classroom, Esther, who seems to be becoming very professional in her teaching skills. Thus far, Esther is experiencing no major problems in her relationship with the children.

Beth also has a student teacher, Patty, to help her in planning the activities of the class. She is a college senior and is starting to become very knowledgeable about the children and has earned their respect, but she is somewhat dependent on Beth in terms of in which activities the children should be engaged. She is very inquisitive and sometimes demands more attention of Beth than is called for during class time.

Directions

The following pretest consists of a series of verbal interactions in this classroom just described. Put a plus sign (+) beside the numbered statements used by the adult (teacher, aide, or student teacher) that seems to you to be appropriate verbal contingent responses. Put a circle (0) beside the statements used by the adult which you feel constitute negative feedback to the child. There will be some statements that require no scoring. The answers and explanations are on the page after the pretest items.

Please refrain from looking at the
answers until you complete all 25 items.

-
- Pretest Amanda just made a "house" of blocks.
1. Beth: "Good girl, Amanda, you just made a house for me."
 2. Beth: "George, please put the truck on the floor..... thank you."
 3. Esther: "Beth, please tell Joey to come over here. It is time for him to work on the form boards."
 4. Beth: (after seeing Tony complete a puzzle): "Patty, please hand me that block.
Oh, good boy, Tony, you did it all by yourself."
 5. Patty: "Beth, should I take Tina to music, yet?"
 6. Beth: (seeing Tony complete another puzzle): "Tony, that was a good job working on the puzzle. Sorry, Patty, what did you ask?"
 7. Patty: "Should I take Tina to music?"
 8. Beth: "No, not today. The music teacher is out sick."
 9. Larry just started to say the names of animals he sees in a picture book. Esther is sitting next to him.
Esther: "Where is the elephant."

10. Esther: "Beth, Larry is learning the names of all the animals in this book. Isn't that great?"
11. Essie just presented a playdough dog to Patty.
Patty: "Essie, did you make that dog? Good job!"
12. Tommy: "I have to go to the bathroom."
13. Esther: "Whose turn is it to take the children to the bathroom?"
14. Beth: "Yours"
15. Larry: "I have to go too."
16. Esther: "Larry, thank you for telling me you have to go to the bathroom."
17. Tommy just hit Larry.
Beth: "Tommy, we shouldn't hit others. Are you mad?"
18. Tommy: "He hit me first!"
(pointing to Larry)
19. Beth: "I didn't see Larry hit you. If he hits you again, just walk away from him. Larry, come here, please. Did you hit Tommy?"
20. Larry: "Uh-huh"
21. Beth: "Yes Ma'm. Tell Tommy you're sorry for hitting him."
22. Larry: "Sorry, Tommy"
23. Beth: "Tommy, tell Larry you're sorry for hitting him too."

24. Tommy: "I'm sorry"

25. Beth: "Good boy, Tommy. You
told Larry you're sorry."

The answers are on the next page

Answers
Pretest

Statements numbers 3, 5, 7, 8, 12, 14
15, 18, 20, 22 and 24 are not to be
scored because they are either
statements made by the children or
directions given by the adult.

1. + Beth made a response directly
related to Amanda's actions
and Beth's statement was given
before she gave another
instruction.
2. + Beth made an appropriate
request and followed through
with the response.
4. 0 Beth delayed her response to
Tony.
6. + Beth provided the appropriate
response to Tony before turning
her attention to Patty.
9. 0 Esther did not respond to
Larry's verbalizations before
giving him another instruction.
10. + Esther did not respond to Larry
appropriately because she was
sitting next to him. If she
had been away from him or had
delayed in telling Beth or
Larry of what he was doing,
this would not have been an
appropriate response.
11. + Patty provided the appropriate
response to Essie.
13. 0 Esther did not respond to
Tommy at all.

- 16. + Esther responded appropriately to Larry. She should have provided the same response to Tommy.
- 17. + Beth provided an appropriate response to Tommy's action in a reprimanding way.
- 19. + This interaction is emotionally sound. Beth used words to settle a conflict between Tommy and Larry.
- 21. + Beth corrected Larry's statement appropriately.
- 23. 0 Beth did not reinforce Larry's apology.
- 25. + Beth appropriately responded to Tommy; the same response which should have been given to Larry.

Directions How did you do? If you missed any, please continue working in this booklet. If you did not miss any, turn to the post-test and work through those items. For any of the following tasks, use any previous examples to assist you. Take your time and remember to work through all of the tasks. Don't worry if you missed any items on the pretest. Some can be quite tricky. Continue on and you'll see how to discriminate between verbal contingent responsiveness and negative verbal feedback.

Description

The statements used by adults in the preschool classroom should be at the language level of the child.

Animation is necessary so as to make verbal interactions fun for the child instead of some laborious task.

Whatever the child does in the classroom should be noticed by the adult and reacted to in an appropriate manner. Usually, this manner is verbal. Let's use the terms "quality" and "timeliness" to characterize appropriate verbal responses to a child's statements or actions.

Quality

The quality of an adult's response to a child means that what the adult says to the child directly reflects the statement or action. For example, if a child makes a block building, the adult should tell the child he made a building made of blocks; if the child spills his milk, the teacher should respond to him by describing the action instead of merely telling him to clean up his mess. The adult should always use words that communicate. Words that are above the comprehension level of the child do not communicate.

Situation

Put yourself in this situation. You are in Germany and you know a dozen German words. You find yourself in a situation that demands you know more than you actually do know. When a need arises and the 12 words you know are not enough, you will discover that you are not communicating. Thus it is for the preschool child versus the adult. Be careful. Just as you will learn German with the use of it, children will learn the "adult" language given the chance to comprehend it and use it.

Examples

1. Tommy: "I want a cookie."
Beth: "You must be hungry."
(good)
"O. K." (bad)
2. Essie: "This is a bear."
Patty: "That is not a bear,
that's a lion." (good)
"Wrong, that four legged
beast of the jungle is a
lion, otherwise known as
the king of the forest!"
(bad)
3. Joey presents a plate of "make
believe" cookies to Esther.
Esther: "What are you giving
me?..... Cookies?
Thank you!" (good)
"Thanks; go clean up the
kitchen area." (bad)

4. Tim just pulled Louise's hair.

Beth: "Tim, you just pulled
Louise's hair. That hurt
her." (good)

"Tim, sit in the corner."
(bad)

5. Deana has been sitting still in her
chair for ten minutes while all the
other children are busy with various
group games.

Esther: "Deana, is something wrong
today? All the others are
having a lot of fun playing
games." (good)

"Deana, get up and get
going!" (bad)

Task 1

Directions

Try these examples. Place a + next to
the numbered statements you feel are
appropriate responses; place a 0 next to
those numbered statements you feel are
not appropriate to the situation. Refer
to the vignette if you need a refresher
on the classroom setting.

Task 1

Beth is working with Larry on the
balance beam.

1. Beth: "Larry, you're doing so well
in keeping your balance on
this balance beam! Your
friends and family will be so
excited that you have made so
much gross-motor progress!"

2. Beth: "Good job, Larry. You
didn't fall off!"

3. Beth: "Keep your foot off the
floor, Larry. Good job!"

Larry: "Can I hold your hand?"

4. Beth: "I think you can do it all by yourself."
5. Beth: "Absolutely not!"
Esther is working with Tina in the story book area. Several children are around them.
Tina: "Dog"
6. Esther: "No, Tina, that is a cat."
Tina: "Cat"
7. Esther: "What does a cat say?"
Tina: "woof-woof"
8. Esther: "No, that is what a dog says.
What does a cat say?"
Tina shrugs her shoulders.
9. Esther: "Tina needs some help.
George, do you know what a cat says?"
George: "Meow"
10. Esther: "Good, George, a cat does say
"meow"."
Patty is working with Tommy in the self-help area.
Tommy: "Help me, please."
11. Patty: "O. K., Tommy, put your hands along side both sides of this manipulation board. Take your hands out of your hair. This is not hard!"
Tommy responds but does not put his hands where Patty told him to put them.
12. Patty: "No, Tommy, here is where I want your hands. Now watch me."

Tommy attempts it and gets one
button buttoned.

13. Patty: "Didn't you like the ice
cream we had for snacks?"
-

The answers are on the next page.

Answers
Task 1

1. 0 This response was over the preschool child's language level. A simple "good job" would do.
2. + This one was fine-short and to the point, directly relating to Larry's actions.
3. + The correction made here was appropriate; it directly reflected Larry's actions.
4. + Again, the response was appropriate. The encouragement given was called for, too.
5. 0 Usually, a response like this to a preschool child is a punisher. Perhaps in an activity later in the day, Beth might want to hold hands with Larry. Punishing statements could result in inhibiting further child initiated interactions.
6. + This was a good sequence. The correction made directly reflected Tina's statement.
7. 0 Esther did not respond to Tina's correct response.
8. + The correction given was appropriate and adequately reflects the child's action.

9. + This response may be a border-line appropriate response. Since Tina demonstrated she did not know the answer, Esther fed back the situation to Tina and the other children.
10. + Esther appropriately reinforced George's statement.
11. 0 This response was clearly too complicated for a preschool child.
12. + Patty modified her requests appropriately, still relating to the buttoning instead of Tommy's hands.
13. 0 Patty's statement had nothing to do with the task at hand.

Criteria

So far we have covered the quality of an adult's verbal contingent responsiveness. The response is of an appropriate quality if it is:

1. directly related to what the child has just said, done, or presented;
 2. within the limits of the child's level of understanding; and
 3. presented in an appropriate tone of voice.
-

Clarification

You may wonder about these latter two criteria. If the child gives a puzzled look or some other response that indicates he does not receive your attempted communication with him, the probability that you are "talking over his head" is high. Speaking to the child in a negative tone of voice (screaming, harsh, etc.) will also elicit an other than desirable response from the child, such as shying away or crying.

Timeliness

The adult's response to the child should be given to the child before his attention is drawn away to some other activity. Since the preschool child is egocentric, what he does should be responded to in a timely manner, giving him some awareness that the adult is attending to his needs. This attention should not be delayed if what the child says or does is appropriate. Timeliness of an adult's response means to provide appropriate verbal responses to the child before the former directs attention to another child or another adult in the room, or before giving that child another instruction or comment.

Examples of
Timeliness

Joey is building a block tower.

Beth: "That's a good tower."
(good)

"Oh, Patty, Joey just
dropped a block. Will you
hand it to me? Joey,
that's a good tower!" (bad)

Amanda asks for more juice.

Patty: "Good asking for more
juice, Amanda." (good)

"Amanda has already
finished her juice.
Good asking for more juice,
Amanda." (bad)

Larry hits Tommy.

Esther: "Larry, you just hit Tommy.
We don't hit other people."
(good)

After finishing tying
Tommy's shoe laces; "No,
Larry, we don't hit others."
(bad)

Tommy starts a temper tantrum.

Beth: "Tommy, you're upset.
Let's go outside." (good)

"Patty, Tommy is getting
upset. I'm going to take
him outside. Tommy, let's
go outside." (bad)

Task 2
Directions

Now try this exercise. The
following is an extension of the
vignette you read before the pre-
test. Place a dotted line through
the statements where the adult has
made an error in providing timely
contingent responses. The first
error is marked for you.

Task 2

Beth, Esther and Patty are with all the children in group time. Beth has asked Patty to lead the activity. Since all the children love to play with water, Patty has decided that all children and adults circle around the large water/sand table. Patty is going around the table asking questions of everyone concerning the toys in the water table.

Patty: "Beth, what do you like to play with in the water table?"

Beth: "I like playing with the ducks. They make noise when I squeeze them."

Patty: "Beth likes to play with the ducks. How about you, Tony? Tony, what do you like to play with?"

Tony: "Ducks!"

Joey: "I like fish!"

Patty: ~~"Joey, it's not your turn yet, please be patient,"~~

Patty: "Tony, did you say you like the ducks, too?"

Tony: "Yes, Ma'm"

Patty: "Good boy! How about you, Amanda? What do you like to play with here?"

Joey: "I like fish!"

Amanda: "I like the buckets. To fill them up."

Patty: "Amanda likes the buckets. Joey, please be patient or you will have to leave the water table."

Tommy just threw water on Larry.

Esther: "I know Amanda likes the buckets. Show me the yellow bucket."

Amanda shows the yellow bucket to Esther and Patty.

Patty: "Good job, Amanda, that is the yellow bucket. What else do you do with buckets?"

Joey: "I like fish!"

Patty: "Beth, please take Joey from the table. He won't wait for his turn."

Amanda: "I build sand castles."

Patty: "What time is it, Esther? Oh, yes, I like to build sand castles!"

The answers are on the next page

Answers
Task 2

Patty: "Joey, it's not your turn yet, please be patient." is marked because Patty did not first respond to Tony. Patty did appropriately respond to Joey but the response should have first been acknowledged.

Esther: "I know Amanda likes the buckets..." should be marked because the water throwing was not dealt with at all. Tommy's action was inappropriate and should have warranted some cleaning up by Tommy.

Patty: "Beth, please take Joey from the table..." should be marked. Patty responded to Joey's behavior but not directly to him.

Patty: "What time is it, Esther" should be scored as inappropriate because of the delay between Amanda's statement about sand castles and Patty's response to Amanda.

Comment

When a child's behavior is spontaneous as in Tommy's case, it is very hard to discern whether to ignore a one time occurrence, such as throwing water. When an episode such as this occurs, especially when it involves another child, the adult needs to intervene. A thorough discussion of behavior management is beyond the scope of this training module; however, suffice it to say that an adult's contingent responsiveness can extend beyond verbal means. It is essential for the adult in this classroom to intervene in multimodal ways.

Criteria of Timeliness

The verbal response of the adult in the classroom may be considered timely if it is:

1. given before another instruction or comment is made to that child or another person; and
 2. given within the attention span of the child. (Note: one may be hesitant to use the term "immediate" because attention spans of children are as varying as each child's personality.)
-

Summary
Criteria

The adult's verbal contingent responses may be considered appropriate if the following criteria are met:

The response is

1. given so as to reflect the child's statement, action, or object he has made;
2. given within the limits of the child's comprehension level;
3. presented with an appropriate tone of voice;
4. given before another instruction or comment is made to that child or anyone else; and
5. given within the attention span of the child.

Non-Verbal
Behavior - A

You are probably familiar with children who have disabilities which hinder speech and language development, such as deafness and cerebral palsy. These children attempt to make their wishes known through gesturing, eye-pointing, or making some vocal response to a yes/no question. Teaching this type of child requires a lot of patience.

But even more important is the adult's verbal response to any attempt of the child to communicate.

Non-Verbal
Behavior - B

Another example of non-verbal behavior is the child at work on some task. He may be working independently from the adult and could be very content working by himself. The adult needs to be aware of what all children are doing during the free play times. When the adult sees the child doing something appropriate, a verbal response should immediately be forthcoming from the adult witnessing the event. If the child is behaving inappropriately, the adult witnessing the occurrence should appropriately verbally respond in a manner which meets the five criteria presented in a previous section of this module.

Summary of
Non-Verbal
Behavior

In sum, the verbal responses to non-verbal behavior are just as important as the verbal responses to children's verbal behavior.

It has been said that if you laugh at something a child has just done, there is a strong likelihood that the child will do it again. Therefore, if you like what the child is doing, tell him so and why you like it. If you do not like something the child is doing, tell him so and why you would not like to see that behavior again. Preschool children are smarter than we tend to think!

Task 3

In the space below, give at least two examples of children's non-verbal behavior you have experienced. Think back to a practicum you had or some other teaching experience where a child was non-verbal, and then when a particular child was demonstrating some inappropriate behavior. Try to think how you responded to these behaviors. Other examples are provided for you on the next page.

Examples of
Verbal Responses

The following are some examples of appropriate adult's verbal contingent responses to children's non-verbal behavior.

Dennis is a spastic cerebral palsied child who can utter "yes" and "no", although not very distinctly.

Beth: "Dennis, is this a cup?"

Dennis: "Yes"

Beth: "Did you say 'yes'? Good job. This is a cup."

Dennis is working on learning to discriminate between three shapes: squares, circles, and triangles. He demonstrates this by eye-pointing.

Beth: "Dennis, which of these shapes is a circle?"

Dennis responds by moving his eyes in the direction of the triangle.

Beth: "No, Dennis, that is a triangle. It has three sides. Try again."

Esther is working with a small group of children. Brian usually has a lot of trouble sitting still in his seat for more than one minute.

Esther: "Now, let's look at a story in our story book."

Brian is sitting quietly.

Esther: "Brian, I really like the way you are sitting so well. Will you hand me the story book?"

Brian hands the book to Esther.

Esther: "Thank you Brian, for getting the book for us."

Brian starts fidgeting in his seat. He sees a toy across the room, one he's been wanting to play with all morning.

Esther: "Brian, look at me."

Brian does not look at her.

Esther (this time tapping Brian's cheek): "Brian, look at me."

Brian looks at Esther.

Esther: "You are looking at me now. Good, we will play with the toys in a little while. Now it's story book time."

Task 4
Directions

This exercise is designed to see how well you do in recognizing appropriate adult verbal contingent responses to children's non-verbal behavior. If necessary, return to the list of criteria for appropriate verbal contingent responses to refresh your memory. Place a + beside the numbered statements which meet all five criteria for appropriate verbal contingent responses. Place a 0 beside the statements which fail to meet at least one of the criteria. There are several statements which require no scoring.

Task 4

Beth and Esther are working on food identification with a small group of children. Billy is a behavior problem; Lonnie is a child with spastic cerebral palsy. He can point to objects; he is non-verbal. Bruce is non-verbal; he has been deaf since birth, but he is learning sign language very well and can lip read moderately well.

1. Beth: "Can anyone tell me what this is?" She holds up a banana.
2. Bruce signs "banana".
3. Esther pats Bruce on the back.
4. Beth (holding up an apple, an orange, and a banana):
"Lonnie, which of these is the apple?"
5. Lonnie points to the orange.
6. Beth: "No, Lonnie, that is an orange. Which is the apple?"
7. Lonnie points to the apple.
8. Beth: "Now, let's use pictures of this food."
9. Billy throws the fruit to the floor and starts hitting himself.
10. Esther: "Beth, should we ignore Billy?"
11. Beth: "This time, but let's keep an eye out for any other time."
12. Beth: "O.K., Billy - enough!"
13. Billy calms down and picks up the fruit.
14. Esther: "Thank you for picking up the fruit, Billy. You picked up what you threw on the floor."
15. Beth: "Billy, give me the apple."
16. Billy gives her the apple.
17. Beth: "Now, give me the orange."

18. Billy gives her the orange.
19. Beth: "Now, give me the banana."
20. Billy eats the banana.
21. Beth: "Billy, you are eating the banana. I asked you to give me the banana. I guess it is time for snacks!"
22. Esther: "Lonnie, are you ready for snacks?"
23. Lonnie attempts to nod his head.
24. Esther: "Lonnie, you showed me you are ready for snacks. You can be the first to get juice today."
25. Esther: "Bruce, are you ready for juice and crackers?"
26. Bruce nods his head and signs "yes".
27. Esther: "Patty, Bruce has just used the new sign you taught him!"
28. Esther: "Bruce, can you sign 'cracker'?"
29. Bruce signs "no".
30. Esther: "You do not know the sign for 'cracker'? O. K. This is the sign for 'cracker'." (While signing for him).

The answers are on the next page

Answers

Task 4

Statements numbers 1, 2, 4, 5, 7, 9, 11, 13, 15, 16, 18, 20, 22, 23, 25, 26, 28, and 29 are not to be scored because they are either statements or commands by an adult, or actions made by a child.

- 3. 0 Bruce is deaf and a pat on the back is appropriate for acknowledgement purposes; but, to appropriately contingently respond to a deaf pre-school child, face-to-face verbal feedback is more appropriate.
- 6. +
- 8. 0 No response was made by Beth.
- 10. 0 Billy should have received an immediate response, one that reflected his behavior.
- 12. 0 Beth delayed responding to Billy. This response also did not reflect Billy's actions.
- 14. +
- 17. 0 No response was given; instead, another request was made to Billy.

19. 0 No response was given;
instead Beth continued
by giving another request
to Billy.
21. +
24. +
27. 0 The acknowledgement of the
behavior Bruce just
performed should have been
directed toward Bruce.
30. +

Comment

What is said by an adult in the preschool classroom is important; it helps shape children's learning. There are many variables present in each classroom which contribute to this learning, not the least of which is how something is said to a child in response to some statement, action, or product of the child. An adult's personality is reflected in how verbal interactions take place; therefore, it is very important that the adult respond to each child as the latter speaks and acts. This response should be in terms of the content of what is said or done and given in a timely manner so as to positively reinforce the child's appropriate behavior and punish inappropriate behavior.

There is an intrinsic trust within a preschool child toward the adult; this trust must not be violated.

Directions

Now that you have almost completed this module, go back to the previous examples, especially those you missed. Make sure you check each task for those items you were unclear of with the summary criteria just presented. Each example of an appropriate response met all five criteria; the examples of inappropriate responses failed to meet at least one criterion. When you have finished, proceed with work on the posttest. After completing the posttest, compare your answers with those given in the pages following the posttest. Good luck!

Posttest
Directions

Place a + next to the statements which meet the criteria for appropriate contingent responses; place a 0 next to the statements which fail to meet all criteria. If you need, review the section entitled "Summary Criteria" as you work on this task. There are a few statements which will not be scored.

If you need, review the vignette presented to you before the pre-test to refresh your memory concerning the scenario.

Posttest

The children are getting ready to leave for the day.

1. Tony: "Time to go."
2. Beth: "That's right, Tony, we are almost ready to go home."
3. Tina: "Where's my coat?"
4. Esther: "Patty, help Tina find her stuff before she starts crying, please."
5. Patty: "O. K., Esther."
6. George: "Are we going to sing good-bye?"
7. Beth: "George, you remembered our song and I forgot! No, we won't have time today."
8. Beth: "O. K., everybody, we had a really good day today. I'll see you tomorrow. Bye-bye, Tony."
9. Tony: "Bye"
10. Beth: "Good saying good-bye, Tony."
11. Patty: "Bye-bye, Tina."
12. Tina: "Bye-bye"
13. Beth: "Good-bye, George"
14. George: "Good-bye"

15. Beth: "George, you never used to talk to me or anyone else. Are you feeling alright. I mean, you were a good boy today!"
16. Tommy: "Is this my coat?"
17. Esther: "No, Tommy, yours is the blue coat."
18. Larry: "May I have more milk, now?"
19. Patty: "Isn't it nice, Larry, to go home now?"
20. Patty: "Larry, stop running. We walk in the classroom."
21. Larry: "He pushed me."
22. Patty: "Beth, what should I do; Tommy just pushed Larry?"
23. Beth: "Tommy, come here, please... why did you push Larry?"
24. Tommy: "I don't know."
25. Beth: "It's not nice to push anybody. We talked about this before. You don't want to be pushed, do you?"
26. Tommy: "No, Ma'm"
27. Beth: "I know you don't. Go tell Larry you're sorry for pushing him." (Tommy apologizes to Larry)
"Thank you for telling Larry you're sorry."
28. Esther: "Tina, you just put your coat on all by yourself. Good girl. Show Beth."
29. Beth: "Tina, did you put your coat on all by yourself?"

30. Tina: "Yes, I did!"
31. Beth: "Patty, help George and Amanda with their coats, please. That's good, Tina. Good job!"
32. Patty: "George, give me that coat now! I know you can do it if you try. You're certainly not trying!"
33. Beth: "O. K. now, your parents are all waiting for you outside. Line up."
34. Esther: "Good, Amanda, you lined up first."
35. Beth: "You are all so quiet; now we can go outside. Esther, please lead them out to their parents."

The answers are on the next page.

Answers
Posttest

Statements numbers 1, 3, 5, 6, 8, 9, 11, 12, 14, 16, 18, 21, 24 and 26 are not to be scored because they are either directed at an adult or a request made to a child.

2. +

4. 0 Esther failed to respond to Tina directly. She should have asked Patty to help Tina after indicating to Tina she did not know the location of the coat.

7. +

10. +

13. 0 Beth failed to respond to Tina at all.

15. 0 This statement was too complicated and it had nothing to do with the content of his statement.

17. +

19. 0 Patty's response did not directly relate to Larry's question.

20. +

22. 0 Although this statement was a response to an action by Tommy, Larry should have been further verbally acknowledged.

23. +

25. +

27. +

28. +

29. +

31. 0 Beth delayed responding to Tina's obvious excitement of accomplishments.

32. 0 Patty responded to George's frustration with more frustration, thereby creating a strained situation.

34. +

35. +

Conclusion

As you have observed, many statements are made between child and adult in a very little time. For example, the post-test segment could be a scene that lasts but one or two minutes. Imagine how many responses you could give a child in four hours! Your jobs as teachers and aides are quite difficult but very essential. You help shape the learning of these children through your responsiveness as well as through your instruction. This module was designed to make you more aware of how you respond to your students. The information presented was brief, however, it focussed on the criteria for appropriate contingent responsiveness.

While you could add a thousand more examples of responses you have provided your students, those presented in this booklet hit upon most of the major types. Now it's your turn. Start with completing the evaluation form on the next page. Your comments will help make this training module more effective. The next time you conduct class, be aware of your students' statements, actions, and what they present to you. Please leave this booklet with the director of this training session. If you desire a copy of it, please contact Stephen B. Cannon. One will be forwarded to you at the conclusion of this research. Thank you again for your most helpful cooperation and assistance.

Evaluation
Directions

Please take a few minutes to complete this evaluation. Your comments will help this investigator design a better training module. Be as candid as you can. Use the back if you wish.

Evaluation

1. This module helped make me more aware of how to respond to my students.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Comments:

2. This module is too long for the content involved.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Comments:

3. This module is too short for the content involved.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Comments:

4. The content of this module is on target regarding the elements of how to respond contingently to my students.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Comments:

5. The material is presented clearly without eliciting any confusion.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1	1	1	1	1

Comments:

6. The format of this booklet makes learning the concepts presented easier than if presented totally in written discussion or lecture.

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1	1	1	1	1

Comments:

7. I would make no changes in this training module (content, examples, format, etc).

Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
1	1	1	1	1

Comments:

8. Please make any other comments which would assist in making others more aware of the ways they verbally respond to children.

Comments:
